

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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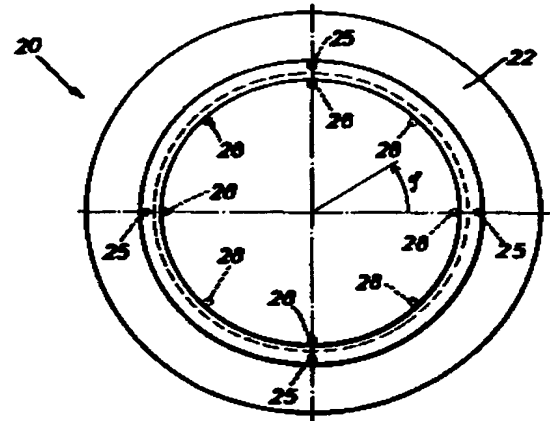
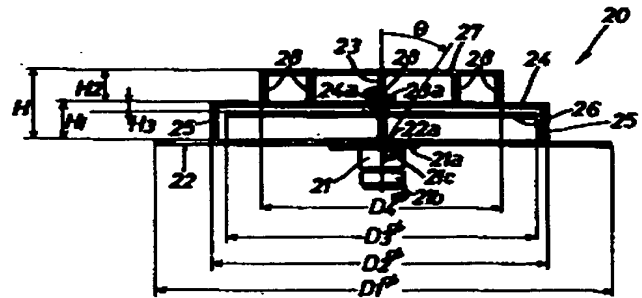
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TITLE : ANTENNA FOR VEHICLE



**ABSTRACT :** PURPOSE: To obtain sending and receiving function similar to a rod type vertical whip antenna by determining diameter of metallic disks, axial length of a metallic rod and the height of the second metallic disk to the first metallic disk in relation to wavelength of sending signals.

CONSTITUTION: Eight metallic rods 28-28 are erected vertically at nearly equal intervals on a metallic disk 24 along circumference of the metallic disk 24 corresponding to the outer periphery of a metallic disk 27. At the same time, upper ends of them support outer periphery of the metallic disk 27 to short-circuit the outer periphery to the metallic disk 24. In this constitution, the diameters  $D^{\phi_1} \sim S^{\phi_4}$  of metallic disks 22, 24, 26, 27, total length H of the metallic rod 23, height  $H_1$  of the metallic disk 24 to metallic disk 22, height  $H_2$  of the metallic disk 27 to metallic disk 26 and height  $H_3$  of the metallic disk 24 to metallic disk 26 are determined in relation to the wavelength of sending signals. Thus, sending and receiving function similar to a rod type whip antenna can be obtained.

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